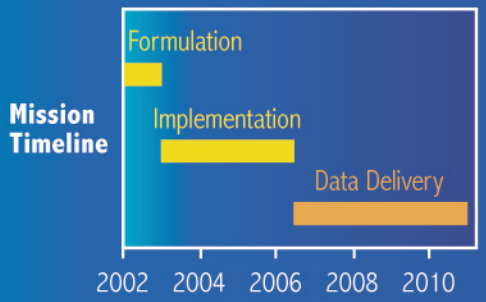
LANDSAT Data Continuity Mission

LDCM Life Cycle

The LDCM procurement is being conducted in two distinct phases:

- Formulation Phase
  - During this nine month period in 2002, Resource21 and DigitalGlobe further develop the preliminary design of their systems.
  - NASA and USGS gain insight into industry capabilities, the proposed multi-mission system, as well as their business plans.
  - Industry validates the Government's requirements before moving forward with the final design.



- Implementation Phase
  - Single offeror will develop, fabricate, launch and operate the system.
  - Government will execute due diligence as a responsible "business partner".
  - Data and data products will be delivered for at least five years beginning in 2006.

LDCM Partners

- National Aeronautics and Space Administration (NASA)
- Department of Interior's United States Geological Survey (USGS)
- NASA Goddard Space Flight Center (GSFC)
- NASA Stennis Space Center (SSC)
- USGS Earth Resources Observation Systems (EROS) Data Center

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Cover Image: North Carolina Outer Banks after Hurricane Floyd
September 23, 1999
(Landsat 7)

For additional information on LDCM and the Landsat legacy, please visit our websites:
http://ldcm.nasa.gov
http://ldcm.usgs.gov

National Aeronautics and Space Administration

USGS science for a changing world
United States Geological Survey

NP-2002-1-419-GSFC

LANDSAT Data Continuity Mission

LDCM

LANDSAT Data Continuity Mission

LDCM EXTENDING THE LEGACY OF GLOBAL LAND OBSERVATION

The Landsat Legacy

Landsat satellites have been providing us with images of the Earth's surface for more than 30 years beginning with the Earth Resources Technology Satellite (ERTS) mission in 1972. These images have been crucial to land surface monitoring, land use and land cover change, and global change research. With Landsat data, scientists have been able to study a broad spectrum of resource management and global change issues such as coastal shoreline changes, the consequences of natural disasters, deforestation, and urban growth.

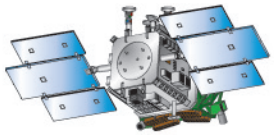
These data constitute the longest continuous record of the Earth's surface as seen from space. The Landsat Data Continuity Mission (LDCM) will extend this record by providing future data that are consistent with previous Landsat data to continue scientific research on land use and land cover change.

The Landsat Mission Objective

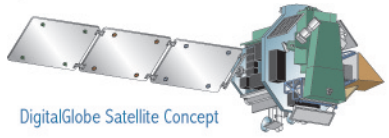
The Landsat program acquires moderate resolution multispectral imagery affording global, synoptic coverage of the Earth's land surfaces on a seasonal basis where natural and human-induced changes can be detected, characterized, and monitored over time.

LDCM Background

- For the Landsat 7 successor, NASA is partnering with USGS to:
  - Ensure continuity of Landsat science data.
  - Maximize the opportunity for private sector fulfillment of Government data needs.
- NASA and USGS are procuring the data through an innovative Government/industry collaborative venture.
- Two formulation phase study contracts were awarded in March 2002 to Resource21 and DigitalGlobe to explore commercial/ Government options and architectures.



Resource21 Satellite Concept



DigitalGlobe Satellite Concept

LDCM Cornerstones

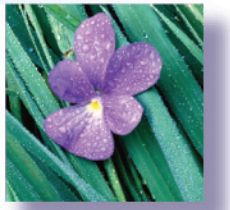
Science:

- Allow change detection by ensuring that LDCM data are consistent with previous Landsat data.
- Provide global coverage of the Earth's land surfaces on a seasonal basis.
- Acquire observations at spatial, temporal, and spectral resolutions sufficient to characterize and understand the causes and consequences of change.
- Make the data readily available to those who study and manage the Earth's land resources.

Commercialization: LDCM is a unique opportunity for the Government to acquire science data in partnership with private industry. The commercially owned and operated system will follow the Science Data Specification and Data Policy specified by NASA and USGS for Landsat data, while concurrently allowing commercial exploitation of data. Through this cooperative approach, LDCM will:

- Expand the commercial remote sensing market.
- Guarantee unrestricted, nondiscriminatory access to Landsat quality data.
- Minimize product prices for users.
- Protect the interests of the commercial data providers.
- Incorporate incremental enhancements.
- Keep value-added services in the private sector.

NASA and USGS hope that this cooperative approach will be the "bridge" to Government procurement of commercial Landsat data in the future.



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